QUESTIONS AND ANSWERS

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I. FREQUENTLY ASKED QUESTIONS:

Q1. If I have questions about this funding announcement, who do I contact?

ANSWER: Please see the FOA guidance on submitting FOA content questions and response publication. Applicants may submit questions regarding this ARPA-E's Funding Opportunity Announcement (FOA) to ARPA-E-CO@hq.doe.gov. All emails must include the FOA name and number in the subject line. The cover page and Executive Summary of the Funding Opportunity Announcement state the deadlines for submitting questions to ARPA-E-CO@hq.doe.gov.

Q2. How will I receive a response to questions submitted to arpa-e-co@hq.doe.gov about this FOA?

ANSWER: Responses are posted in the "Frequently Asked Questions" section of ARPA-E's website. There are general FAQs and a FAQ page for each FOA.

ARPA-E will post responses on a weekly basis to any questions that are received.

ARPA-E will cease to accept questions approximately 5 business days in advance of each submission deadline. Responses to questions received before the cutoff will be posted approximately one business day in advance of the submission deadline. ARPA-E may re-phrase questions or consolidate similar questions for administrative purposes.

Q3. Will ARPA-E post a response to every question submitted to arpa-e-co@hq.doe.gov?

ANSWER: No. ARPA-E will only post responses to questions that have not already been addressed by a published FAQ. Also, ARPA-E may consolidate similar questions for administrative purposes.

Q4. If I have questions about arpa-e exchange, who do I contact?

ANSWER: Applicants may submit questions regarding ARPA-E's online application portal, ARPA-E eXCHANGE, to ExchangeHelp@hq.doe.gov. All emails must include the name and number of the Funding Opportunity Announcement in the subject line.

Q5. Can I speak or meet with the ARPA-E program director or other ARPA-E personnel about this funding opportunity announcement?

ANSWER: No. Upon the issuance of this Funding Opportunity Announcement (FOA), ARPA-E Program Directors and other ARPA-E personnel are prohibited from communicating (in writing or otherwise) with Applicants, or potential Applicants, regarding the FOA. This "quiet period" remains in effect until ARPA-E's public announcement of its project selections. During the "quiet period," Applicants may submit questions regarding the FOA to ARPA-E-CO@hq.doe.gov with the FOA name and number in the subject line. Applicants may also submit questions regarding ARPA-E's online application portal, ARPA-E eXCHANGE, to ExchangeHelp@hq.doe.gov with the FOA name and number in the subject line. ARPA-E will not accept or respond to communications received by other means (e.g., fax, telephone, mail, hand delivery). Emails sent to other email addresses will be disregarded.

Q6. Can a person be PI on one proposal and a co-PI on a second separate proposal?

ANSWER: Yes, but the applications must be scientifically distinct from one another.

Q7. May applicants submit more than one concept paper to this funding opportunity?

ANSWER: Yes, but each Concept Paper submission must be scientifically distinct.

Q8. I have developed a technology that may be a good fit for this funding opportunity. Will ARPA-E please review the attached project information and let me know if I should make a submission to this funding opportunity?

ANSWER: No. Applicants must review the Technical Requirements of this funding opportunity announcement to determine if their technology warrants a submission to ARPA-E. See e.g. Section I.D ("Technical Categories of Interest") and Section I.F (Applications Specifically Not of Interest) of the FOA.

II. Questions for week ending: OCTOBER 3, 2014

Q9. There is a submission deadline discrepancy between FOA-0001197 cover page "November 10, 2014" and FOA page 1 "November 3, 2014". Please confirm Concept Paper Submission Deadline is November 10, 2014.

ANSWER: The Concept Paper submission deadline is November 10, 2014. ARPA-E issued a modification to the FOA on October 1, 2014 to reflect this information.

Q10. Can ARPA-E make their LCOE model available for public use? Where can we find it?

ANSWER: The power plant model was used as an internal tool to calculate performance and LCOE. Note that ARPA-E does not require Concept Papers to make use of the model and instead has specified technical targets in Section I.E (Technical Performance Targets),that support the program objectives specified in Section I.C (Program Objectives). .

Q11. What are the assumptions and methodologies for their LCOE model?

ANSWER: The relevant assumptions and methodologies for the ARPA-E LCOE model are included in Section C.2, Techno-economic analysis for Indirect Dry-Cooling System (including the associated references) and in Table 1: "Working parameters used in the derivation of technical performance targets" found in Section E.

Q12. Is the cost of $50/kW for insulation cost plus material or component cost only? Does it include operation cost? If it does, what are the key assumptions of electricity cost/kWhr and other assumptions?

ANSWER: The $50/kW target for Category 1 technologies is for the capital cost of the technology, including all necessary components (insulation, material, etc). As it is a capital cost target, it does not include operating costs. Keep in mind, however, that one of the objectives of the ARID FOA is that technologies developed should result in less than 5% increase in the levelized cost of electricity. See Section I.C (Program Objectives) and Section I.E (Technical Performance Targets) of the FOA. ARPA-E does not prescribe an electricity cost/kWh to use in cost calculations, but it is recommended that concept papers and/or full applications identify and justify any cost assumptions made.

Q13. We have developed a ** and would like to know if our technology will qualify for ARID funding? Our technology involves an ****. Would this type of solution qualify for ARID consideration?**

ANSWER: ARPA-E may not provide a pre-submission assessment regarding the responsiveness of an Applicant's technology or proposed concept. Applicants must review the Technical Categories of Interest specified in Section I.D and Applications Specifically Not of Interest specified in Section I.F of the FOA and independently determine whether their proposed concept warrants a submission to the ARID FOA.

III. Questions for week ending: OCTOBER 10, 2014

Q14. A. Would technologies that lead to significant reduction in water loss (> 75% reduction in water loss, compared to present day cooling towers), and have other significant benefits, be considered non-responsive, or are such solutions acceptable to ARPA-E?

ANSWER: ARPA-E may not provide a pre-submission assessment regarding the responsiveness of an Applicant's technology or proposed concept. Applicants must review the Technical Categories of Interest specified in Section I.D and Applications Specifically Not of Interest specified in Section I.F of the FOA and independently determine whether their proposed concept warrants a submission to the ARID FOA.

Q14.B The same enabling technology can significantly benefit the steam condenser and result in compact, lightweight, low maintenance condensers. Would it be acceptable to propose technology development that affects steam condensers to reduce water losses substantially?

ANSWER: ARPA-E may not provide a pre-submission assessment regarding the responsiveness of an Applicant's technology or proposed concept. Applicants must review the Applications Specifically Not of Interest specified in Section I.F and Technical Categories of Interest specified in Section I.D of the FOA and independently determine whether their proposed concept warrants a submission to the ARID FOA.

Q15. Is the "COP_{cool}" metric (COP_{cool} > 2 on page 23) for a single-effect sorption system or will multi-effect systems that meet this metric be considered?

ANSWER: The "COP_{cool}" metric applies to all sorption systems, including single and multi-effect systems. Multi-effect systems that meet the relevant technical objectives and targets outlined in the FOA will be considered.

Q16. I have a question in regards to submission of Concept Papers for the ARID FOA. Can ideas on both Category 1 & 2 be proposed in a single Concept Paper or will such a submission be considered non-responsive? In other words, if we have ideas for both Category 1 and 2 (that may provide an integrated solution) should we submit two Concept Papers?

ANSWER: Please see Section I.D (Technical Categories of Interest) of the FOA. Concepts that include the development of technologies across multiple Categories (such as into 1 and 2, as suggested in this question) may be combined into a single paper or split into two (or more) separate Concept Papers. ARPA-E will not recommend an approach - it is up to the applicant to decide the best way to present their concept(s) to ARPA-E. Note that if the development of technologies across multiple Categories is presented in a single Concept Paper, it will be important that the Concept Paper make reference to and meet technical targets across all relevant categories. The proposer should also consider whether or not the combined system will fit best in Category 3.

IV. Questions for week ending: OCTOBER 17, 2014

Q17. Does this FOA consider solutions that are only applicable to large centralized power production?

ANSWER: No. At a minimum, concepts must be applicable to large centralized power production, but ARPA-E is also interested in those that may also be applicable to smaller, decentralized systems see, Section C.5 of the FOA, Scalability and Modularity for Commercialization.

Q18. Will making use of non-potable water sources (vs. using freshwater) be considered?

ANSWER: Non-potable sources may be used in the system, but note that the program objective regarding no net water dissipation would still apply. As per the relevant language in Section C of the FOA, Program Objectives: "The ARID program seeks to enable the development of transformational power plant cooling technologies that…dissipate no net water to the atmosphere (note that in cases where water vapor is dissipated to the atmosphere, not including surface water evaporation, an equal or greater amount of water vapor must be captured);" The FOA purposefully refers to general "water" dissipation, rather than "freshwater" dissipation. Thus, dissipation of any water (potable, nonpotable, freshwater, seawater, brackish water, reclaimed water, etc.) in the cooling process is viewed to be the same.

V. Questions for week ending: OCTOBER 24, 2014

No new questions received.

VI. Questions for week ending: OCTOBER 31, 2014

Q19. We would like a clarification on the definition of "COP_{cool}" for a Sorption/Desorption system on page 23 of the document. Specifically, what does the term "$Q_{heat,in}$" include?

ANSWER: Please see ARID FOA Modification 2. The explanation for Section I.E Technical Performance Targets, Subcategory 2A: Sorption/Desorption Cooling System has been updated to clarify COP_{cool}.